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SCHISTOSOME MATERIALS FOR VACCINE DEVELOPMENT.(U)
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Schistosoma Maturity for Vaccine Development

by

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and

F. A. Lewis

28 September 1962

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19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Schistosoma mansoni; Biomphalaria glabrata; trematode; cercariae; eggs; worms; miracidia; snails; optimal maintenance conditions.		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Parasite materials (S. mansoni) were supplied to investigators at the National Naval Medical Research Institute in Bethesda, Maryland for immunoparasitological research.		

This contract is funded to provide schistosomes (*Schistosoma mansoni*) for research at the Naval Medical Research Institute (NMRI). To meet the needs of the NMRI investigators, the life cycle of this parasite is maintained at the Biomedical Research Institute (BRI) and research material provided as requested.

Biomphalaria glabrata snails (Nimri substrain) were reared in 20 gallon aquaria. Eggs collected from these snails were hatched and the young snails reared in shallow pans to infection size of 5 to 7 mm diameter. Each week, the following schedule was maintained. (1) 250 to 300 snails were exposed to 5 to 7 or to 1 newly-hatched miracidia each. Exposed snails were kept in a 27 to 28°C warm room. (2) Snails exposed 4 week previously were checked individually for cercarial production and thereafter patent snails were held in a warm dark room in dark covered pans. Rotifers were washed off all shedding snails. (3) 8 to 10 mice were exposed to 250 to 270 cercariae for use as the source of miracidia 7 weeks later. (4) Cercariae were harvested 4 days a week and delivered to investigators as requested.

Schistosome research materials were provided on request as follows: cercariae as a mix of both sexes; cercariae of known sex, that is, from 1 miracidium snails with a known male or female infection; snails shedding cercariae; infected mice.

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- Dean, D. A., Bukowski, M. A., and Cheever, A. W. 1981. Relationship between acquired resistance, portal hypertension, and lung granulomas in two strains of mice infected with *Schistosoma mansoni*. *American Journal of Tropical Medicine and Hygiene*, 30: 809-814.
- Dean, D. A., Cioli, D., and Bukowski, M. A. 1981. Resistance induced by normal and irradiated *Schistosoma mansoni*: ability of various worm stages to serve as inducers and targets in mice. *American Journal of Tropical Medicine and Hygiene*, 30: 1028-1032.
- Stek, M., Minard, P., Dean, D. A., and Hall, J. E. 1981. Immunization of baboons with *Schistosoma mansoni* cercariae attenuated by gamma irradiation. *Science*, 212: 1518-1520.
- Stek, M., Dean, D. A., and Clark, S. S. 1981. Attrition of schistosomes in an irradiation-attenuated cercarial immunization model of *Schistosoma mansoni*. *American Journal of Tropical Medicine and Hygiene*, 30: 1033-1038.
- Dean, D. A., Mangold, B. L., Georgi, J. R., and Cioli, D. In press. Studies on the induction and expression of resistance to schistosome infection in mice. *Scripta Varia* (Pontifical Academy of Sciences).

**CURRENT PRESENTATIONS BASED ON
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Dean, D. A., Mangold, B. L. Georgi, J. R., and Ciolek, D. Studies on the induction and expression of resistance to schistosome infection in mice. Pontifical Academy of Sciences Study Group on "Perspectives of Immunization in Parasitic Diseases," Vatican City, Europe, 29 September - 20 October 1981.

Dean, D. A. Schistosomiasis Update: Resistance to reinfection. Thirtieth Annual Meeting of the American Society of Tropical Medicine and Hygiene, San Juan, Puerto Rico, 18-20 November 1981.

Dean, D. A., Mangold, B. L. Georgi, J. R., and Jacobson, R. H. Tracking of *Schistosoma mansoni* irradiated cercariae in immunized, previously infected and normal mice by means of autoradiography. Fifth International Congress of Parasitology, Toronto, Canada, 7-14 August 1982.

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